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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/692,236	10/23/2003	Edwin C. Kragh	BING-1-1024	8401

7590 12/13/2005

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EXAMINER	
SIEK, VUTHE	

ART UNIT	PAPER NUMBER
2825	

DATE MAILED: 12/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/692,236	KRAGH ET AL.	
	Examiner	Art Unit	
	Vuthe Siek	2825	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 September 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-56* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8,11-21,24-36,39-49 and 52-56* is/are rejected.

7)☒ Claim(s) *9,10,22,23,37,38,50 and 51* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This office action is in response to application 10/692,236 and amendment filed on 9/30/2005. Claims 1-56 remain pending in the application.

Claim Objections

2. Claims 1, 16, 29 and 44 are objected to because of the following informalities: the recitation of "reconciling" is not a defined claimed language because it is vague; the metes and bounds of the claimed limitations are not clearly defined. Examiner has reasonably interprets this phrase in rejecting the claims. Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-8, 11-21, 24-36, 39-49 and 52-56 are rejected under 35 U.S.C. 103(a) as being obvious over applicant admitted prior art (AAPA) in view of Ozaki (US 2003/0050723).

5. As to claims 1 and 29, the AAPA teaches designing a wiring harness assembly for a system comprising generating wiring harness installation (WHI) models suitably for interconnection of electrical systems within each zone and open connections for systems in zones throughout the system and then wiring harness assemblies (WHA) are fabricated according to the WHI models to interconnect subsystems throughout the

system. However, the AAPA does not generate the design of WHAs models needed to interconnect subsystems between different zones of the system (see background of the instant application). Ozaki teaches to a wire harness design supporting method to easily transform three-dimensional data of a wire harness into a two-dimensional wiring harness data by inputting a wire harness data to be routed in a desired object into a computer via a predetermined data input unit. The wire harness data includes coordinate information three-dimensionally designed to a state adapted to the object of routing (reconciliation by correlation). A development plane used to two-dimensionally develop the wire harness is set and wire harness data is divided into a plurality of segments at predetermined division points and is developed on the segment unit basis so that all of the segments are included in the development plane (see Fig. 1 and its description, summary). Thus, the three-dimensional data of the wire harness can be considerably easily transformed into a two-dimensional drawing and the wire harness designed period can be shortened (extracting, reconciling). These teachings correspond to the recitation of automatically extracting, reconciling and automatically generating one wiring harness assembly model. By combining these above teachings, practitioners in the art would have found obvious to automatically extracting wiring data from WHI models, reconciling wiring connections between the WHI models and automatically generating at least one WHA model because by extracting and reconciling or transforming a three-dimensional wiring data into a two-dimensional wiring data WHI models in different zones can be easily adapted for routing. In addition, Ozaki teaches wiring harness data of a wire harness to be routed via a predetermined data input unit,

the data including coordinate information three-dimensionally designed to a state adapted to the object or routing (wire harness data inputting step), a development plane used to two-dimensionally develop the wire harness data is set (development plane setting step) (selecting an overall system and parameters for which a wiring harness assembly is desired, Ozaki teaches a wire harness design for an automobile), and wiring harness data is divided into a plurality of segments at predetermined division points and is developed in the development plane (two-dimensional transformation step). Thus, the three-dimensional data of the wire harness can be considerably easily transformed into a two-dimensional drawing, and the wire harness designing period can be shortened. Desirably, in the two-dimensional transformation step, all of segments on all of paths are sequentially developed from a desired start point into the development plane on the segment unit basis. Thus, two-dimensional development can be efficiently carried out without repeating trial and error. The computer determines an attachment region in the object of routing of each of the wire harness data on the basis of the coordinate information of the wire harness data and determines the development plane in accordance with the attachment region, the development plane can be easily determined, and the efficiency of the process can be improved (0011-0015). These teachings clearly suggest selecting an overall system and parameters in order to accomplish a wire harness design as desired.

6. As to claims 16 and 44, remarks set forth in rejection claims 1 and 29 equally apply in rejecting claims 16 and 44. Manually reconciling connections not automatically reconcilable would have been obvious to one of ordinary skill in the art because, when

automated process is unable to complete, and manual process must be adopted in order to resolve any problem that may be occurred during the interconnections between WHI models in order to generate WHA model. In addition, Ozaki teaches wiring harness data of a wire harness to be routed via a predetermined data input unit, the data including coordinate information three-dimensionally designed to a state adapted to the object or routing (wire harness data inputting step), a development plane used to two-dimensionally develop the wire harness data is set (development plane setting step) (selecting an overall system and parameters for which a wiring harness assembly is desired, Ozaki teaches a wire harness design for an automobile), and wiring harness data is divided into a plurality of segments at predetermined division points and is developed in the development plane (two-dimensional transformation step). Thus, the three-dimensional data of the wire harness can be considerably easily transformed into a two-dimensional drawing, and the wire harness designing period can be shortened. Desirably, in the two-dimensional transformation step, all of segments on all of paths are sequentially developed from a desired start point into the development plane on the segment unit basis. Thus, two-dimensional development can be efficiently carried out without repeating trial and error. The computer determines an attachment region in the object of routing of each of the wire harness data on the basis of the coordinate information of the wire harness data and determines the development plane in accordance with the attachment region, the development plane can be easily determined, and the efficiency of the process can be improved (0011-0015). These

teachings clearly suggest selecting an overall system and parameters in order to accomplish a wire harness design as desired.

7. As to claims 2-4, 17-19, 30-32 and 45-47, Ozaki teaches the WHI models are created in a computer aided three-dimensional interactive application to generate the wiring data in a standard data format including one of the standard for the exchange of product model data in a standard data format (Fig. 1, page 1).

8. As to claims 5 and 33, Ozaki teaches the wire harness data includes coordinate information three-dimensionally designed to a state adapted to the object of routing (reconciliation by correlation). A development plane used to two-dimensionally develop the wire harness is set and wire harness data is divided into a plurality of segments at predetermined division points and is developed on the segment unit basis so that all of the segments are included in the development plane (see Fig. 1 and its description, summary).

9. As to claims 6, 20, 34 and 48, Ozaki teaches parameter list including turning direction operation, where the turning not to exceed a predetermined allowable reference angle (parameter including a break model at junction option). Although, Ozaki does not explicitly teach modifying the parameter, this inclusion of a modified parameter would have been obvious to one of ordinary skill in the art at the time the invention was made because in order to accommodate with a predetermined allowable reference angle the turning would have to be adjusted or modified accordingly.

10. As to claims 7, 21, 35 and 49, at least Ozaki teaches the reconciling parameter including a turning direction (parameter including a break model at junction option). Thus, only one of teaching of Ozaki would be sufficient to meet the claimed limitation.

11. As to claims 8 and 36, the rejection of the claimed limitation is described as in rejection of claims 16 and 44.

12. As to claims 11, 24, 39 and 52, Ozaki teaches two-dimensional model of wiring harness assembly (summary; Fig. 1).

13. As to claims 12, 15, 25, 28, 40, 43, 53 and 56, Ozaki teaches generating of the wiring harness is performed according to a generating parameter list customizable by a user ([0031]; turning angle not to exceed a predetermined allowable reference angle to prevent deterioration of the quality product during manufacturing).

14. As to claims 13, 26, 41 and 54, Ozaki teaches a parameter list includes a flatten bundle into a two-dimensional space option (two-dimensionally transformed data of a wire harness; Fig. 1).

15. As to claims 14, 27, 42 and 55, Ozaki teaches generating a processing report describing the generating of the at least one wiring harness assembly model (Fig. 1; describing a two-dimensional transformed data for manufacturing wire harness, thereby two-dimensionally developing the wire harness data on the segment unit basis so that all of the segments in the system are included in the development plane).

Allowable Subject Matter

16. Claims 9-10, 22-23, 37-38 and 50-51 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all

of the limitations of the base claim and any intervening claims. The incorporation of claims 9-10, 22-23, 37-38 and 50-51 also results the ambiguous claimed limitation as in above claim objections.

Remarks

17. Applicant's arguments filed on 9/30/05 have been fully considered but they are not persuasive. Applicant argued that Ozaki does not teach or suggest selecting an overall system and parameters for which a wiring harness is desired. Ozaki teaches a wire harness design supporting method to easily transform three-dimensional data of a wire harness to a two-dimensional drawing (see summary). Ozaki teaches wiring harness data of a wire harness to be routed via a predetermined data input unit, the data including coordinate information three-dimensionally designed to a state adapted to the object or routing (wire harness data inputting step), a development plane used to two-dimensionally develop the wire harness data is set (development plane setting step) (selecting an overall system and parameters for which a wiring harness assembly is desired, Ozaki teaches a wire harness design for an automobile), and wiring harness data is divided into a plurality of segments at predetermined division points and is developed in the development plane (two-dimensional transformation step). Thus, the three-dimensional data of the wire harness can be considerably easily transformed into a two-dimensional drawing, and the wire harness designing period can be shortened. Desirably, in the two-dimensional transformation step, all of segments on all of paths are sequentially developed from a desired start point into the development plane on the segment unit basis. Thus, two-dimensional development can be efficiently carried out

without repeating trial and error. The computer determines an attachment region in the object of routing of each of the wire harness data on the basis of the coordinate information of the wire harness data and determines the development plane in accordance with the attachment region, the development plane can be easily determined, and the efficiency of the process can be improved (0011-0015) (this would suggest reconciling). These teachings clearly suggest selecting an overall system and parameters in order to accomplish a wire harness design as desired. Applicants argued that Ozaki does not reconciling the entire system built in different segments. Ozaki teaches all of the segments on all of paths are sequentially developed from a desired start point of a preset reference trunk line toward a termination point into the development plane on the segment unit basis. Thus, two-dimensional development can be efficiently carried out without repeating trial and error. In addition, Ozaki teach the development plane is preset in correspondence with an attachment region of the wire harness in the object of routing. These teachings suggest automatically reconciling the entire system built in different segments. Ozaki teaches the entire system is breaking down into segments or regions at predetermined points and is developed on the segment unit basis so that all segments are included in the development plane (0011-0012). These teachings suggest that the segments are separated developed and designed. When assemble all segments together the two-dimensional development can be efficiently carried out without repeating trial and error (suggest reconciling). Examiner agreed with applicants that Ozaki does not teach how to reconciling as recited in the

claims 9-10, 22-23, 37-38 and 50-51, where these claims are indicated allowable subject matter.

18. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

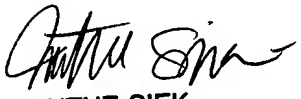
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vuthe Siek whose telephone number is (571) 272-1906. The examiner can normally be reached on Increase Flextime.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Smith can be reached on (571) 272-1907. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Vuthe Siek



VUTHE SIEK
PRIMARY EXAMINER